In the claims:

Claims 1-31 canceled.

32. (new) A method of manufacturing a filter, comprising the steps of preparing a reaction mixture of polymer-forming agents; conducting a reaction with obtaining a filtration element of a predetermined shape; during the preparing the reaction mixture first dissolving resorcein in water, then warming up a solution up to 40°-50° C, then introducing a catalyst, steering up and adding formaldehyde after homogenization of the solution, holding at a room temperature until the solution gets turbid; pouring the obtained polymer solution into a mold with a perforated support and a load-bearing reinforcement being preliminarily installed in the mold; using the mold in form of a sheet non-woven volumetric material and fixed on a perforated support; thermostating the mold in two stages; first a polymer is to be held until a gel is generated at a pouring temperature and after that at a temperature of 80°-90°C; after cooling to a room temperature removing the porous ion-exchange element obtained from the mold and placing into a filter housing; filling the filter housing with a suspension of a finely grained hydrophilous powder containing substances correcting properties of filtered water with a granule size greater than a size of ion-exchange element pores; bubbling the suspension; creating an easily breakable protection corrective filtration layer on an inlet surface of the filtration element by settling

granules of the powder on an inlet surface of the element; and after is complete covering by a layer of a given thickness, retaining the layer of a velocity head of a flow; and after contamination moving the layer by a backflow of the liquid.

33. (new) A method as defined in claim 32; and further comprising carrying out the bubbling of the suspension of a finely grain powder by a flow of a liquid being filtered.

34. (New) A method as defined in claim 32; and further comprising carrying out the bubbling of the suspension by aeration of the liquid.

35. (new) A method as defined in claim 32; and further comprising for obtaining an element pore size equal to 0.001-0.002 μm, taking an initial concentration of the polymer forming agents to be 50-40 mass % and a ratio of formaldehyde resorein equal to 2.5-1 moles, with a ratio of a number of cross-linking either bonds to a number of methylene bonds being equal to 1.2, and for generation of the protection layer taking a powder granule size equal to 0.03-0.3 μm and a thickness of the protection layer of 0.01-0.5 μm.

36. (new) A method as defined in claim 32; and further comprising for obtaining an element pore size equal to 0.02-0.2 μm, taking an initial concentration of polymer-formign reagents to be 40-35 mass % and a ratio of

formaldehyde-resorein equal to 2.0-1 moles, with a ratio of a number of cross-linking either bonds to a number of methylene bonds being equal to 1.15; and for generating the protection layer taking a powder granule size equal to 0.3-4.0 μm and a thickness of the protection layer to be equal to 0.05-0.2 μm

37. (new) A method as defined in claim 32; and further comprising for obtaining an element pore size equal to 0.2-0.3 μm, taking an initial concentration of polymer-forming reagents to be 35-25 mass% and a ratio of formaldehyde-resin equal to 1.8-1 moles as a ratio of a number of crosslinking ether bonds to a number of methalene bonds being equal to 0.9; and for generation of the protective layer, taking a powder granule size to be eqeual to 4.0-10.0 μm and a thickness of the protection layer to be equal to 0.2-1.0 μm.

38. (new) A method as defined in claim 32; and further comprising, for obtaining an element pore size equal to 3.0-8.0 μm, taking an initial concentration of polymer forming reagents to be 25-20 mass % and a ratio of formaldehyde-reserin equal to 1.5-1 moles, with a ratio of a number of crosslinking ether bonds to a number of methylene bonds being equal to 0.8; and for generating the protection layer, taking a powder granule size equal to 10.0-25.0 μm and a thickness of the protection layer equal to 1.0 μm and over.

39. (new) A method of manufacturing filter for water, comprising the steps of a housing provided with an inlet branch pipe, an outlet branch pipe and a drain branch pipe with shutoff valves; providing a main filtration element composed of an ion-exchange material and having inlet and outlet surfaces for a liquid being filtered, said ion-exchange material of said main filtration element being volumetric with a predetermined geometric shape, is armored by a load-bearing reinforcement attached to a perforated support and forming a continuous porous framework of microglobules with pores of predetermined size in correspondence with parameters of cleaning; determining the filtration mass volume of the material of said main filtration element according to the follows expression:

$v_{\lambda} \frac{Q.L^2}{k.h_v}$ for a flat

filter $v_{cyl} = \frac{Q.L^2(L+d)}{k \cdot h_v \cdot d}$ for a hollow cylindrical filter;

$$v_{con} = \frac{Q.L^2(2L + d_k + D_K)}{k.h_{\cdot v}(d_k + D_k)}$$

where Q is a required flow rate of the liquid being purified kg/s;

L is a filtering layer thickness, mm;

d is an internal diameter of the cylinder filter, mm;

d_k and D_k are internal diameters of an upper and a lower cross-section of the conical filter, mm;

k=0.12-0.14 mm/s, is an experimental coefficient for the material with a spatial globular structure maker;

covering an inlet surface of said main filtration element with an additional filtration layer composed of a finely grained substance introduced in form of powder via a loading valve in a housing cavity into a flow of filtration liquid deposited on said inlet surface of said main filtration element and dynamically retained on it by a liquid velocity head, so that a powder granule size is greater than a size of ion-exchange material pores, determining an additional volume introduced depending upon a shape of the main filtration elements according to a following expression

V_{add} - $HB\Delta$, mm^2 for a flat filter;

$V_{add}=\pi H\Delta(D+\Delta)$, mm^3, for a cylindrical filter;

$V_{add}=H(R\Delta+r\Delta+\Delta^2)$, mm^3, for a conical filter

where H is a filtration element height, mm

B is a filtration element width; mm

D is a filtration element diameter, mm;

R is a radius of a lower conical base, mm;

r is a radius of an upper conical base, mm;

Δ is a required thickness of the protective layer mm.